WHAT IS CLAIMED IS:

1. An image display apparatus comprising:

a vacuum envelope having a first substrate and a second substrate opposed to each other with a gap;

a structure arranged between the first substrate and the second substrate and fixed to at least one of the first and second substrates;

an image display surface formed on an inner surface of one of the first and second substrates; and

a plurality of electron emitting elements which are arranged on an inner surface of the other of the first and second substrates and emit electrons toward the image display surface,

the structure having a thermal expansion coefficient higher than that of the at least one substrate to which the structure is fixed.

2. An image display apparatus according to claim 1, wherein the structure has a thermal expansion coefficient 1.02 to 1.2 times as high as the thermal expansion coefficient of the at least one substrate.

3. An image display apparatus according to claim 2, wherein the structure has a thermal expansion coefficient 1.07 to 1.15 times as high as the thermal expansion coefficient of the at least one substrate.

4. An image display apparatus according to claim 1, wherein the structure includes a plate-like grid located between the first substrate and the

second substrate and opposed to the first and second substrates.

5. An image display apparatus according to claim 1, wherein the structure includes a plurality of support members which are arranged between the first substrate and the second substrate and support the first and second substrates against the atmospheric pressure.

6. An image display apparatus according to claim 1, wherein the structure has a thermal expansion characteristic such that an elongation rate thereof is higher than that of the at least one substrate at any temperature.

7. An image display apparatus comprising:

a front substrate having an image display surface formed on an inner surface thereof;

a rear substrate opposed to the image display surface with a gap and having thereon a plurality of electron emitting elements which emit electrons to the image display surface; and

a plate-like grid located between the front substrate and the rear substrate so as to opposite to the front substrate and the rear substrate and fixed to the rear substrate,

the grid having a thermal expansion coefficient higher than that of the rear substrate.

8. An image display apparatus according to

claim 7, which further comprises a plurality of support members which are arranged between the front substrate and the rear substrate and support the front substrate and the rear against the atmospheric pressure, each of the support members abutting against the rear substrate and having a thermal expansion coefficient higher than that of the rear substrate.

9. An image display apparatus according to claim 8, wherein the support members are fixed to the grid.

10. An image display apparatus according to claim 7, wherein the grid has a thermal expansion coefficient 1.02 to 1.2 times as high as the thermal expansion coefficient of the rear substrate.

11. An image display apparatus according to claim 10, wherein the grid has a thermal expansion coefficient 1.07 to 1.15 times as high as the thermal expansion coefficient of the rear substrate.

12. An image display apparatus according to claim 7, wherein the grid is provided with a plurality of joints fixed to the rear substrate through pedestals, individually.

13. An image display apparatus according to claim 12, which further comprises a power supply terminal provided on an outer surface of the rear substrate, and wherein the grid has electrical conductivity and is connected electrically to the power

supply terminal through at least on of the pedestals and a through hole in the rear substrate.